

CLAIMS:

1. A method of preserving a food commodity comprising applying antimicrobial chemicals to the food commodity and, thereafter, chilling the food commodity.

2. The method of claim 1 further comprising subjecting the food commodity to a process selected from the group consisting of refrigeration, freezing and further food processing steps directly after chilling the food commodity.

3. The method of claim 1, wherein applying antimicrobial chemicals comprises applying liquid ozone.

4. The method of claim 1, wherein applying antimicrobial chemicals comprises contacting the food commodity with chemicals comprising a compound including a halogen.

5. The method of claim 4, wherein applying antimicrobial chemicals comprises contacting the food commodity with chemicals comprising a compound including chlorine.

6. The method of claim 1, wherein applying antimicrobial chemicals comprises contacting the food commodity with chemicals comprising a compound including a phosphate group.

7. The method of claim 1, wherein applying antimicrobial chemicals comprises contacting the food commodity with chemicals comprising hydrogen peroxide.

8. The method of claim 1, wherein applying antimicrobial chemicals comprises contacting the food commodity with chemicals comprising an organic acid.

5 9. The method of claim 8, wherein applying antimicrobial chemicals comprises contacting the food commodity with chemicals comprising lactic acid.

10 10. The method of claim 1, wherein applying antimicrobial chemicals comprises contacting the food commodity with chemicals selected from the group consisting of nisin and lactate.

15 11. The method of claim 1, wherein chilling the food commodity comprises cryogenic chilling.

12. The method of claim 11, wherein cryogenic chilling comprises chilling with a liquefied gas selected from the group consisting of nitrogen, CO₂ and air.

20 13. The method of claim 1, wherein applying antimicrobial chemicals comprises contacting the food commodity with a liquid chemical agent.

25 14. The method of claim 1, wherein applying antimicrobial chemicals comprises contacting the food commodity with an gaseous chemical agent.

15. The method of claim 1, wherein the food commodity is selected from the group consisting of meat, poultry and seafood.

30 16. The method of claim 1, wherein chilling the food commodity comprises reducing the temperature of the food commodity to about 10° C.

17. The method of claim 16, wherein chilling the food commodity comprises reducing the temperature of the food commodity to no more than about 1° C.

5 18. The method of claim 1, wherein chilling the food commodity comprises reducing the temperature of the food commodity to about the freezing temperature of the food commodity in a period of time of less than about one hour.

10 19. The method of claim 18, wherein chilling the food commodity comprises reducing the temperature of the food commodity to about the freezing temperature of the food commodity in a period of time of less than about 10 minutes.

15 20. A method of preserving a food commodity comprising:
coating an exterior surface of the food commodity with
antimicrobial chemicals; and
chilling the food commodity.

20 21. The method of claim 20, wherein chilling the food commodity comprises reducing the temperature of the food commodity from a processing temperature to about the freezing temperature of the food commodity in a period of time of less than about 10 minutes.

25 22. The method of claim 21, wherein the processing temperature comprises about room temperature, and wherein the period of time is about 1 to about 3 minutes.

30 23. The method of claim 20, wherein chilling the food commodity comprises reducing the temperature of the food commodity from room temperature to about 1° C. in a period of time of about 1 to about 3 minutes.

24. The method of claim 20, wherein chilling the food commodity comprises cryogenic chilling.

25. The method of claim 24, wherein cryogenic chilling comprises chilling with a liquefied gas selected from the group consisting of nitrogen, CO₂ and air.

26. The method of claim 20, wherein coating an exterior surface of the food commodity with antimicrobial chemicals comprises applying liquid chemicals to the exterior surface.

27. The method of claim 26, wherein applying liquid chemicals comprises applying liquid ozone.

28. The method of claim 26, wherein applying liquid chemicals comprises contacting the food commodity with chemicals comprising a compound including a halogen.

29. The method of claim 28, wherein applying liquid chemicals comprises contacting the food commodity with chemicals comprising a compound including chlorine.

30. The method of claim 26, wherein applying liquid chemicals comprises contacting the food commodity with chemicals comprising a compound including a phosphate group.

31. The method of claim 26, wherein applying liquid chemicals comprises contacting the food commodity with chemicals comprising hydrogen peroxide.

32. The method of claim 26, wherein applying liquid chemicals comprises contacting the food commodity with chemicals comprising an organic acid.

5 33. The method of claim 32, wherein applying liquid chemicals comprises contacting the food commodity with chemicals comprising lactic acid.

10 34. The method of claim 26, wherein applying liquid chemicals comprises contacting the food commodity with chemicals selected from the group consisting of nisin and lactate.